

**Amendments to the Claims:**

This listing of the claims will replace all prior versions and listings of claims in the application:

**Listing of Claims:**

1 (Currently Amended): A method of the production of a nanoparticle which comprises a step of forming a nanoparticle including a ~~compound~~ hydroxide of a metal ion in a cavity part of a protein, ~~in a solution containing the protein having the cavity part therein, said metal ion, and a carbonate ion and/or a hydrogen carbonate ion,~~

~~wherein said metal ion is any one of a nickel ion ( $\text{Ni}^{2+}$ ), a chromium ion ( $\text{Cr}^{2+}$ ) or a copper ion ( $\text{Cu}^{2+}$ ), and~~

~~said solution comprises a carbonate ion and/or a hydrogen carbonate ion produced by bubbling carbon dioxide thereto~~ by mixing a first solution and a second solution, wherein said first solution contains a protein having a cavity part inside, an alkaline buffer solution, and a metal ion selected from the group consisting of a nickel ion ( $\text{Ni}^{2+}$ ), a chromium ion ( $\text{Cr}^{2+}$ ) and a copper ion ( $\text{Cu}^{2+}$ ), and said second solution contains carbonate ion and/or hydrogen carbonate ion.

2 (Canceled)

3 (Canceled)

4 (Previously Presented): The method of the production of a nanoparticle according to claim 1, wherein said metal ion is a nickel ion.

5 (Previously Presented): The method of the production of a nanoparticle according to claim 1, wherein said metal ion is a chromium ion.

6 (Previously Presented): The method of the production of a nanoparticle according to claim 1, wherein said metal ion is a copper ion.

7 (Currently Amended): The method of the production of a nanoparticle according to claim [[2]] 1, wherein pH of said ~~a~~ solution after mixing is approximately equal to a precipitation point of a hydroxide of said metal ion.

8 (Currently Amended): The method of the production of a nanoparticle according to claim [[4]] 1, wherein pH of said solution after mixing is 8 or greater and 9 or less.

9 (Currently Amended): The method of the production of a nanoparticle according to claim [[4]] 1, wherein ~~said solution further comprises an ammonium ion~~ a third solution containing an ammonium ion is further mixed at said step.

10 (Currently Amended): The method of the production of a nanoparticle according to claim 9, wherein pH of said solution after mixing is greater than 8.3 and equal to or less than 8.65.

11 (Original): The method of the production of a nanoparticle according to claim 1, wherein said protein is at least one of apoferritin, Dps protein, CCMV protein, TMV protein or a heat shock protein.

12 (Canceled)

13 (Currently Amended): The method of the production of a nanoparticle according to claim 1, ~~further comprise~~ comprising a step of eliminating the protein by a heat treatment after forming said nanoparticle.

14 (Canceled)

15 (Canceled)

16 (New): The method of production of a nanoparticle according to claim 1, wherein said second solution comprises carbonate ion and/or a hydrogen carbonate ion produced by bubbling carbon dioxide thereto.